

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method for effectively treating abnormal brain-related conditions by adjusting the central nervous system affecting vagal nerve stimulation (VNS) signal induced by a stimulus generator implanted in a patient in need of vagal nerve stimulation comprising the steps of:

a) monitoring at least one parameter selected from respiratory parameters and physiological acid-base parameters, changes in parameter values which correlate to are induced by changes in the VNS intensity, and

b) regulating the stimulation intensity of the central nervous system affecting vagal nerve stimulation in response to said at least one parameter in order to affect the brain achieve an optimal stimulation effectiveness with regard to the abnormal brain-related condition to be treated.

2. (original) A method as claimed in claim 1 wherein said at least one respiratory parameter is selected from a group consisting of end-tidal carbon dioxide (EtCO<sub>2</sub>), respiratory rate (RR), respiratory frequency (RF), respiration amplitude (RA), and airflow.

3. (original) A method as claimed in claim 1 wherein said at least one physiological acid-base parameter is selected from a group consisting of CO<sub>2</sub> content and pH.

4. (currently amended) ~~A method as claimed in claim 2~~ A method for effectively treating abnormal brain-related conditions by adjusting the central nervous system affecting vagal nerve stimulation (VNS) signal induced by a stimulus generator implanted in a patient in need of vagal nerve stimulation comprising the steps of:

a) monitoring at least one parameter selected from respiratory parameters and physiological acid-base parameters which correlate to the VNS intensity, and

b) regulating the stimulation intensity of the central nervous system affecting vagal nerve stimulation in response to said at least one parameter in order to affect the brain,

wherein said at least one respiratory parameter is end-tidal carbon dioxide (EtCO<sub>2</sub>).

5. (original) A method as claimed in claim 2 wherein said at least one respiratory parameter is respiratory frequency (RF).

6. (original) A method as claimed in claim 1 wherein monitoring is performed by a capnograph.

7. (currently amended) A method for adjusting the central nervous system affecting vagal nerve stimulation (VNS)

signal induced by a stimulus generator implanted in a patient in need of vagal nerve stimulation comprising the steps of:

a) monitoring the level of end-tidal carbon dioxide (EtCO<sub>2</sub>) and respiration frequency which correlate to the VNS intensity, and

b) regulating the stimulation intensity of the central nervous system affecting vagal nerve stimulation in response to ~~said respiratory parameter~~ the monitored end-tidal carbon dioxide and respiration frequency.

8-13. (canceled)